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\\MARTINOS DEVELOPER

HUBER

FRISGO_functional

FRISGO_20251001_JEN

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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\scout_axial_princes

TA: 17 sec Coil Selection: Manual Voxel Size: 1.6x1.6x1.6 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	On
Graphic segment	3rd Segment
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A16.0 H0.0 mm
Orientation	Transversal
Phase Encoding Dir.	A >> P
Slices per Slab	160
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
TR	3.6 ms
TE	1.56 ms
Averages	1
Concatenations	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	3.6 ms
TE	1.56 ms
MTC	Off
Magn. Preparation	None
Flip Angle	16 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
SWI	Off
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
Base Resolution	160
Phase Resolution	100 %
Slice Resolution	69 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	6/8
Asymmetric Echo	Off
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A16.0 H0.0 mm
Orientation	Transversal
Phase Encoding Dir.	A >> P
Slices per Slab	160
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
TR	3.6 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 A16.0 H0.0 mm
Orientation	Transversal
Phase Encoding Dir.	A >> P
AutoAlign	---

Geometry - AutoAlign

Initial Position	L0.0 A16.0 H0.0
L	0.0 mm
A	16.0 mm
H	0.0 mm
Initial Orientation	Transversal
Initial Rotation	0.00 deg

Geometry - Saturation

Saturation Mode	Standard
Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3.6 ms
Segments	1
Concatenations	1

Physio - Cardiac

Tagging	None
Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FOV Read	260 mm
FOV Phase	100.0 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Liver

Liver Registration	Off
Save Original Images	On

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Soft Tissue

Wash-in	Off
Wash-out	Off
TTP	Off
PEI	Off
MIP Time	Off
Measurements	1

Inline - Composing**Inline - MapIt**

MapIt	None
Flip Angle	16 deg
Measurements	1
Contrasts	1

Inline - MapIt

TE	1.56 ms
TR	3.6 ms
Save Original Images	On

Sequence - Part 1

Sequence Name	fl
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	540 Hz/Px
Asymmetric Echo	Off
Segments	1

Sequence - Part 2

Introduction	Off
RF Spoiling	On
Acoustic noise reduction	Off

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX Delta Frequency	0 Hz
TX Nucleus	None
TX Delta Frequency	0 Hz
Coil Elements	AC

Sequence - Special

Readout polarity	Positive
Image processing	Standard
Apply echo spacing	Off
Echo spacing	0 us
Delta echo spacing	0 us
Dummy scans	0 ms
RF pulse duration	100 us
Gradient spoiling	Siemens
Gradient moment factor	1.00
Receiver gain mode	Siemens
Number of segments	1
Current segment	0
Lines before/after seg	0

Sequence - Assistant

SAR Assistant	Off
Allowed Delay	0 s

\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\scout_sag_princes

TA: 13 sec Coil Selection: Manual Voxel Size: 1.6x1.6x1.6 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	On
Graphic segment	2nd Segment
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A16.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	128
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
TR	3.5 ms
TE	1.51 ms
Averages	1
Concatenations	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	3.5 ms
TE	1.51 ms
MTC	Off
Magn. Preparation	None
Flip Angle	16 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
SWI	Off
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
Base Resolution	160
Phase Resolution	100 %
Slice Resolution	69 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	6/8
Asymmetric Echo	Allowed
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A16.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	128
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
TR	3.5 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 A16.0 H0.0 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---

Geometry - AutoAlign

Initial Position	L0.0 A16.0 H0.0
L	0.0 mm
A	16.0 mm
H	0.0 mm
Initial Orientation	Sagittal
Initial Rotation	0.00 deg

Geometry - Saturation

Saturation Mode	Standard
Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3.5 ms
Segments	1
Concatenations	1

Physio - Cardiac

Tagging	None
Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FOV Read	260 mm
FOV Phase	100.0 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Liver

Liver Registration	Off
Save Original Images	On

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Soft Tissue

Wash-in	Off
Wash-out	Off
TTP	Off
PEI	Off
MIP Time	Off
Measurements	1

Inline - Composing

Inline - MapIt

MapIt	None
Flip Angle	16 deg
Measurements	1
Contrasts	1

Inline - MapIt

TE	1.51 ms
TR	3.5 ms
Save Original Images	On

Sequence - Part 1

Sequence Name	fl
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	540 Hz/Px
Asymmetric Echo	Allowed
Segments	1

Sequence - Part 2

Introduction	Off
RF Spoiling	On
Acoustic noise reduction	Off

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX Delta Frequency	0 Hz
TX Nucleus	None
TX Delta Frequency	0 Hz
Coil Elements	AC

Sequence - Special

Readout polarity	Positive
Image processing	Standard
Apply echo spacing	Off
Echo spacing	0 us
Delta echo spacing	0 us
Dummy scans	0 ms
RF pulse duration	100 us
Gradient spoiling	Siemens
Gradient moment factor	1.00
Receiver gain mode	Siemens
Number of segments	1
Current segment	0
Lines before/after seg	0

Sequence - Assistant

SAR Assistant	Off
Allowed Delay	0 s

\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\scout_cor_princes

TA: 13 sec Coil Selection: Manual Voxel Size: 1.6x1.6x1.6 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	On
Graphic segment	1st Segment
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A21.6 F1.2 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Slices per Slab	128
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
TR	3.5 ms
TE	1.51 ms
Averages	1
Concatenations	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	3.5 ms
TE	1.51 ms
MTC	Off
Magn. Preparation	None
Flip Angle	16 deg
Fat-Water Contrast	Standard
Dark Blood	Off
Contrasts	1
SWI	Off
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1
Multiple Series	Each Measurement

Resolution - Common

FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
Base Resolution	160
Phase Resolution	100 %
Slice Resolution	69 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	GRAPPA
Reference Scans	Integrated
Acceleration Factor PE	3
Reference Lines PE	24
Acceleration Factor 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	6/8
Asymmetric Echo	Allowed
Elliptical Scanning	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	3D
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Distance Factor	20 %
Position	L0.0 A21.6 F1.2 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
Slices per Slab	128
Phase Oversampling	0 %
Slice Oversampling	0.0 %
FOV Read	260 mm
FOV Phase	100.0 %
Slice Thickness	1.600 mm
TR	3.5 ms
Multi-Slice Mode	Interleaved
Series	Interleaved
Concatenations	1

Geometry - AutoAlign

Slab Group	1
Position	L0.0 A21.6 F1.2 mm
Orientation	Coronal
Phase Encoding Dir.	R >> L
AutoAlign	---

Geometry - AutoAlign

Initial Position	L0.0 A21.6 F1.2
L	0.0 mm
A	21.6 mm
F	1.2 mm
Initial Orientation	Coronal
Initial Rotation	0.00 deg

Geometry - Saturation

Saturation Mode	Standard
Special Saturation	None

Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Tune up
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

Position	Isocenter
Orientation	Transversal
Rotation	0.00 deg
A >> P	263 mm
R >> L	350 mm
F >> H	350 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Physio - Signal

1st Signal/Mode	None
TR	3.5 ms
Segments	1
Concatenations	1

Physio - Cardiac

Tagging	None
Fat-Water Contrast	Standard
Magn. Preparation	None
Dark Blood	Off
FOV Read	260 mm
FOV Phase	100.0 %
Phase Resolution	100 %

Physio - PACE

Resp. Control	Off
Concatenations	1

Inline - Liver

Liver Registration	Off
Save Original Images	On

Inline - Subtraction

Subtract	Off
Measurements	1
StdDev	Off
Save Original Images	On

Inline - MIP

MIP Sag	Off
MIP Cor	Off
MIP Tra	Off
MIP Time	Off
Radial MIP	Off
Save Original Images	On
MPR Sag	Off
MPR Cor	Off
MPR Tra	Off

Inline - Soft Tissue

Wash-in	Off
Wash-out	Off
TTP	Off
PEI	Off
MIP Time	Off
Measurements	1

Inline - Composing

Inline - MapIt

MapIt	None
Flip Angle	16 deg
Measurements	1
Contrasts	1

Inline - MapIt

TE	1.51 ms
TR	3.5 ms
Save Original Images	On

Sequence - Part 1

Sequence Name	fl
Dimension	3D
Excitation	Non-sel.
RF Pulse Type	Fast
Gradient Mode	Normal
Flow Compensation	None
Bandwidth	540 Hz/Px
Asymmetric Echo	Allowed
Segments	1

Sequence - Part 2

Introduction	Off
RF Spoiling	On
Acoustic noise reduction	Off

Sequence - Nuclei

TX/RX Nucleus	1H
TX/RX Delta Frequency	0 Hz
TX Nucleus	None
TX Delta Frequency	0 Hz
Coil Elements	AC

Sequence - Special

Readout polarity	Positive
Image processing	Standard
Apply echo spacing	Off
Echo spacing	0 us
Delta echo spacing	0 us
Dummy scans	0 ms
RF pulse duration	100 us
Gradient spoiling	Siemens
Gradient moment factor	1.00
Receiver gain mode	Siemens
Number of segments	1
Current segment	0
Lines before/after seg	0

Sequence - Assistant

SAR Assistant	Off
Allowed Delay	0 s

\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\rslh_ep3d_0.30_test

TA: 2:17 min Coil Selection: Manual Voxel Size: 0.3x0.3x0.3 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Multi-echo spacing	40.50 ms
MTC	Off
Flip Angle	23 deg
Fat-Water Contrast	Fast Fat Saturation
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	20
Reordering	Linear

Resolution - Common

FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
Base Resolution	420
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	1
Reference Lines PE	75
Acceleration Factor 3D	3
Reference Lines 3D	18
Reordering Shift 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.1 P45.5 F14.1
R	3.1 mm

Geometry - AutoAlign

P	45.5 mm
F	14.1 mm
Initial Orientation	C > T
C > T	-5.80
> S	0.00
Initial Rotation	-90.00 deg

Geometry - Saturation

Saturation Mode	Quick
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	R1.2 P47.2 F12.2 mm
! Orientation	C > T-6.1
! Rotation	90.00 deg
! F >> H	118 mm
! R >> L	99 mm
! A >> P	24 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
! Ref. Amplitude 1H	370.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	542 Hz/Px
Echo Spacing	2.15 ms
Turbo Factor	108
Segmentation	18
EPI Factor	18

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1100 us
RF time x BW	7
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	On
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	-none-
Phase Correction	per Series
Saturation RF	per Meas.
EPI rise time factor	1.43
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	5000 /10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Regular RO

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS_DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\rslh_ep3d_0.30_run1

TA: 14:56 min Coil Selection: Manual Voxel Size: 0.3x0.3x0.3 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Multi-echo spacing	40.50 ms
MTC	Off
Flip Angle	23 deg
Fat-Water Contrast	Fast Fat Saturation
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	144
Reordering	Linear

Resolution - Common

FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
Base Resolution	420
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	1
Reference Lines PE	75
Acceleration Factor 3D	3
Reference Lines 3D	18
Reordering Shift 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.1 P45.5 F14.1
R	3.1 mm

Geometry - AutoAlign

P	45.5 mm
F	14.1 mm
Initial Orientation	C > T
C > T	-5.80
> S	0.00
Initial Rotation	-90.00 deg

Geometry - Saturation

Saturation Mode	Quick
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	R1.2 P47.2 F12.2 mm
! Orientation	C > T-6.1
! Rotation	90.00 deg
! F >> H	118 mm
! R >> L	99 mm
! A >> P	24 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
! Ref. Amplitude 1H	370.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	542 Hz/Px
Echo Spacing	2.15 ms
Turbo Factor	108
Segmentation	18
EPI Factor	18

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1100 us
RF time x BW	7
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	On
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	-none-
Phase Correction	per Series
Saturation RF	per Meas.
EPI rise time factor	1.43
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	5000 /10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Regular RO

Sequence - Assistant

SAR Assistant	Off
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\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\WB_100ms

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc.: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\rslh_ep3d_0.30_run2_RO

TA: 14:56 min Coil Selection: Manual Voxel Size: 0.3×0.3×0.3 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Multi-echo spacing	40.50 ms
MTC	Off
Flip Angle	23 deg
Fat-Water Contrast	Fast Fat Saturation
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	144
Reordering	Linear

Resolution - Common

FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
Base Resolution	420
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	1
Reference Lines PE	75
Acceleration Factor 3D	3
Reference Lines 3D	18
Reordering Shift 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.1 P45.5 F14.1
R	3.1 mm

Geometry - AutoAlign

P	45.5 mm
F	14.1 mm
Initial Orientation	C > T
C > T	-5.80
> S	0.00
Initial Rotation	-90.00 deg

Geometry - Saturation

Saturation Mode	Quick
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	R1.2 P47.2 F12.2 mm
! Orientation	C > T-6.1
! Rotation	90.00 deg
! F >> H	118 mm
! R >> L	99 mm
! A >> P	24 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
! Ref. Amplitude 1H	370.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	542 Hz/Px
Echo Spacing	2.15 ms
Turbo Factor	108
Segmentation	18
EPI Factor	18

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1100 us
RF time x BW	7
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	On
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	-none-
Phase Correction	per Series
Saturation RF	per Meas.
EPI rise time factor	1.43
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	5000 /10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Regular RO

Sequence - Assistant

SAR Assistant	Off
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\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JENWB_100ms_run2_300x300

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc:: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\rslh_ep3d_0.30_run3

TA: 14:56 min Coil Selection: Manual Voxel Size: 0.3×0.3×0.3 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Multi-echo spacing	40.50 ms
MTC	Off
Flip Angle	23 deg
Fat-Water Contrast	Fast Fat Saturation
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	144
Reordering	Linear

Resolution - Common

FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
Base Resolution	420
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	1
Reference Lines PE	75
Acceleration Factor 3D	3
Reference Lines 3D	18
Reordering Shift 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.1 P45.5 F14.1
R	3.1 mm

Geometry - AutoAlign

P	45.5 mm
F	14.1 mm
Initial Orientation	C > T
C > T	-5.80
> S	0.00
Initial Rotation	-90.00 deg

Geometry - Saturation

Saturation Mode	Quick
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	R1.2 P47.2 F12.2 mm
! Orientation	C > T-6.1
! Rotation	90.00 deg
! F >> H	118 mm
! R >> L	99 mm
! A >> P	24 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
! Ref. Amplitude 1H	370.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	542 Hz/Px
Echo Spacing	2.15 ms
Turbo Factor	108
Segmentation	18
EPI Factor	18

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1100 us
RF time x BW	7
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	On
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	-none-
Phase Correction	per Series
Saturation RF	per Meas.
EPI rise time factor	1.43
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	5000 /10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Regular RO

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JENWB_100ms_run3_300x300

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc.: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\rslh_ep3d_0.30_run4_RO

TA: 14:56 min Coil Selection: Manual Voxel Size: 0.3×0.3×0.3 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Multi-echo spacing	40.50 ms
MTC	Off
Flip Angle	23 deg
Fat-Water Contrast	Fast Fat Saturation
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	144
Reordering	Linear

Resolution - Common

FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
Base Resolution	420
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	1
Reference Lines PE	75
Acceleration Factor 3D	3
Reference Lines 3D	18
Reordering Shift 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.1 P45.5 F14.1
R	3.1 mm

Geometry - AutoAlign

P	45.5 mm
F	14.1 mm
Initial Orientation	C > T
C > T	-5.80
> S	0.00
Initial Rotation	-90.00 deg

Geometry - Saturation

Saturation Mode	Quick
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	R1.2 P47.2 F12.2 mm
! Orientation	C > T-6.1
! Rotation	90.00 deg
! F >> H	118 mm
! R >> L	99 mm
! A >> P	24 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
! Ref. Amplitude 1H	370.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	542 Hz/Px
Echo Spacing	2.15 ms
Turbo Factor	108
Segmentation	18
EPI Factor	18

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1100 us
RF time x BW	7
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	On
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	-none-
Phase Correction	per Series
Saturation RF	per Meas.
EPI rise time factor	1.43
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	5000 /10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Inverted RO

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JENWB_100ms_run4_300x300

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc:: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JENWB_100ms_run4_300x300

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc.: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JENWB_100ms_run5_300x300

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc:: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JENWB_100ms_run6_300x300

TA: 1:58 min Coil Selection: Manual Voxel Size: 3.0x3.0x3.3 mm³ Acc.: 16 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	Off
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	19.6 ms
Vol. TR	98 ms
TE 1	9.60 ms
Multi-echo spacing	18.00 ms
MTC	Off
Flip Angle	10 deg
Fat-Water Contrast	Standard
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	1122
Reordering	Linear

Resolution - Common

FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
Base Resolution	66
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	2
Reference Lines PE	64
Acceleration Factor 3D	8
Reference Lines 3D	20
Reordering Shift 3D	3
Phase Partial Fourier	Off
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
Slices per Slab	40
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	200 mm
FOV Phase	100.0 %
Slice Thickness	3.30 mm
TR	19.6 ms
Vol. TR	98 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R1.6 A19.1 F31.2 mm
Orientation	Sagittal
Phase Encoding Dir.	A >> P
AutoAlign	---
Initial Position	R1.6 A19.1 F31.2
R	1.6 mm

Geometry - AutoAlign

A	19.1 mm
F	31.2 mm
Initial Orientation	Sagittal
Initial Rotation	30.00 deg

Geometry - Saturation

Saturation Mode	Standard
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	L0.9 A1.3 F9.0 mm
! Orientation	T > C-27.1 > S0.4
! Rotation	90.14 deg
! R >> L	123 mm
! A >> P	163 mm
! F >> H	87 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Non-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
? Ref. Amplitude 1H	0.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D

Sequence - Part 1

Excitation	Non-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	2612 Hz/Px
Echo Spacing	0.53 ms
Turbo Factor	5
Segmentation	1
EPI Factor	33

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1020 us
RF time x BW	8
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	Off
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	Single-RECT
Phase Correction	per Series
Saturation RF	per Shot
EPI rise time factor	1.20
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	10 / 10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Dual-polarity

Sequence - Assistant

SAR Assistant	Off
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\\MARTINOS DEVELOPER\HUBER\FRISGO_functional\FRISGO_20251001_JEN\rslh_ep3d_0.30_run5_RO

TA: 14:56 min Coil Selection: Manual Voxel Size: 0.3×0.3×0.3 mm³ Acc:: 3 Rel. SNR: 1.00**Properties**

Start measurement without further preparation	On
Wait for User to Start	Off
Start measurements	Single Measurement
Prio Recon	Off
Auto Open Inline Display	Off
Auto Close Inline Display	Off
Load Images to MR View&GO	On
Auto Store Images	On
Disable auto transfer to PACS	Off
Load Images to Stamp Segments	Off
Load Images to Graphic Segments	Off
Graphic segment	Default
Inline Movie	Off

Routine

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Averages	1
Multi-echo Shots	1
AutoAlign	---
Coil Elements	AC

Contrast - Common

TR	56.6 ms
Vol. TR	6119.61 ms
TE 1	17.60 ms
Multi-echo spacing	40.50 ms
MTC	Off
Flip Angle	23 deg
Fat-Water Contrast	Fast Fat Saturation
Magn. Prep. Shots	1
Contrasts	1
Reconstruction	Magnitude

Contrast - Dynamic

Dynamic Mode	Standard
Measurements	144
Reordering	Linear

Resolution - Common

FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
Base Resolution	420
Phase Resolution	100 %
Slice Resolution	100 %
Interpolation	Off

Resolution - Acceleration

Acceleration Mode	CAIPIRINHA
Reference Scans	GRE/Separate
Acceleration Factor PE	1
Reference Lines PE	75
Acceleration Factor 3D	3
Reference Lines 3D	18
Reordering Shift 3D	1
Phase Partial Fourier	6/8
Slice Partial Fourier	Off

Resolution - Filter

Raw Filter	Off
Elliptical Filter	Off
Distortion Correction	Off
Normalize	Off
Image Filter	Off

Geometry - Common

Slab Group	1
Slabs	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
Slices per Slab	18
Phase Oversampling	0.0 %
Slice Oversampling	0.0 %
FOV Read	130 mm
FOV Phase	100.0 %
Slice Thickness	0.31 mm
TR	56.6 ms
Vol. TR	6119.61 ms
Multi-echo Shots	1

Geometry - AutoAlign

Slab Group	1
Position	R3.1 P45.5 F14.1 mm
Orientation	C > T-5.8
Phase Encoding Dir.	H >> F
AutoAlign	---
Initial Position	R3.1 P45.5 F14.1
R	3.1 mm

Geometry - AutoAlign

P	45.5 mm
F	14.1 mm
Initial Orientation	C > T
C > T	-5.80
> S	0.00
Initial Rotation	-90.00 deg

Geometry - Saturation

Saturation Mode	Quick
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Geometry - Tim Planning Suite

Set-n-Go Protocol	Off
Table Position	0 mm
Table Position	H

System - Miscellaneous

Coil Selection	Manual
Radial Sorting	Off
MSMA	S - C - T
Sagittal	R >> L
Coronal	A >> P
Transversal	F >> H
Coil Combination	Adaptive Combine
Matrix Optimization	Off

System - Adjustments

Adjustment Strategy	Standard
B0 Shim	Brain
B1 Shim	TrueForm
Adjustment Tolerance	Auto
Confirm Frequency	Never
Assume Silicone	Off

System - Adjust Volume

! Position	R1.2 P47.2 F12.2 mm
! Orientation	C > T-6.1
! Rotation	90.00 deg
! F >> H	118 mm
! R >> L	99 mm
! A >> P	24 mm
Reset	Off

System - pTx

B1 Shim	TrueForm
Excitation	Slab-sel.

System - Tx/Rx

Frequency 1H	297.118008 MHz
! Ref. Amplitude 1H	370.000 V
Reset	Off
Correction Factor	1.00
Image Scaling	1.000

Sequence - Part 1

Sequence Name	vaso a2d6453
Dimension	3D
Excitation	Slab-sel.
RF Pulse Type	Normal
Gradient Mode	Fast
Reordering	Linear
Bandwidth	542 Hz/Px
Echo Spacing	2.15 ms
Turbo Factor	108
Segmentation	18
EPI Factor	18

Sequence - Part 2

Introduction	On
RF Spoiling	On

Sequence - Special

RF duration	1100 us
RF time x BW	7
PAT ref. FA	3 deg
Fat sat. FA	110 deg
T1 (Ernst FA)	1200 ms
Invert PE	Off
Min. TE w/ PF	On
Ramp Sampling	On
Trigger per shot	Off
Noise image	Off
Relax spoilers	Off
Round up Vol. TR	Off
MT flip angle	500 deg
MT off-res.	2000 Hz
MT RF duration	10240 us
Custom Water Exc.	-none-
Phase Correction	per Series
Saturation RF	per Meas.
EPI rise time factor	1.43
G. spoil dephasing[1]	0.0 pi
G. spoil dephasing[2]	4.0 pi
G. spoil dephasing[3]	2.0 pi
Modify Ice Config	On
G-factor map	Off
GRAPPA Regularization	5000 /10^6
Slab Scale	-10 %
RF spoil scheme	Conventional
Read polarity	Inverted RO

Sequence - Assistant

SAR Assistant	Off
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